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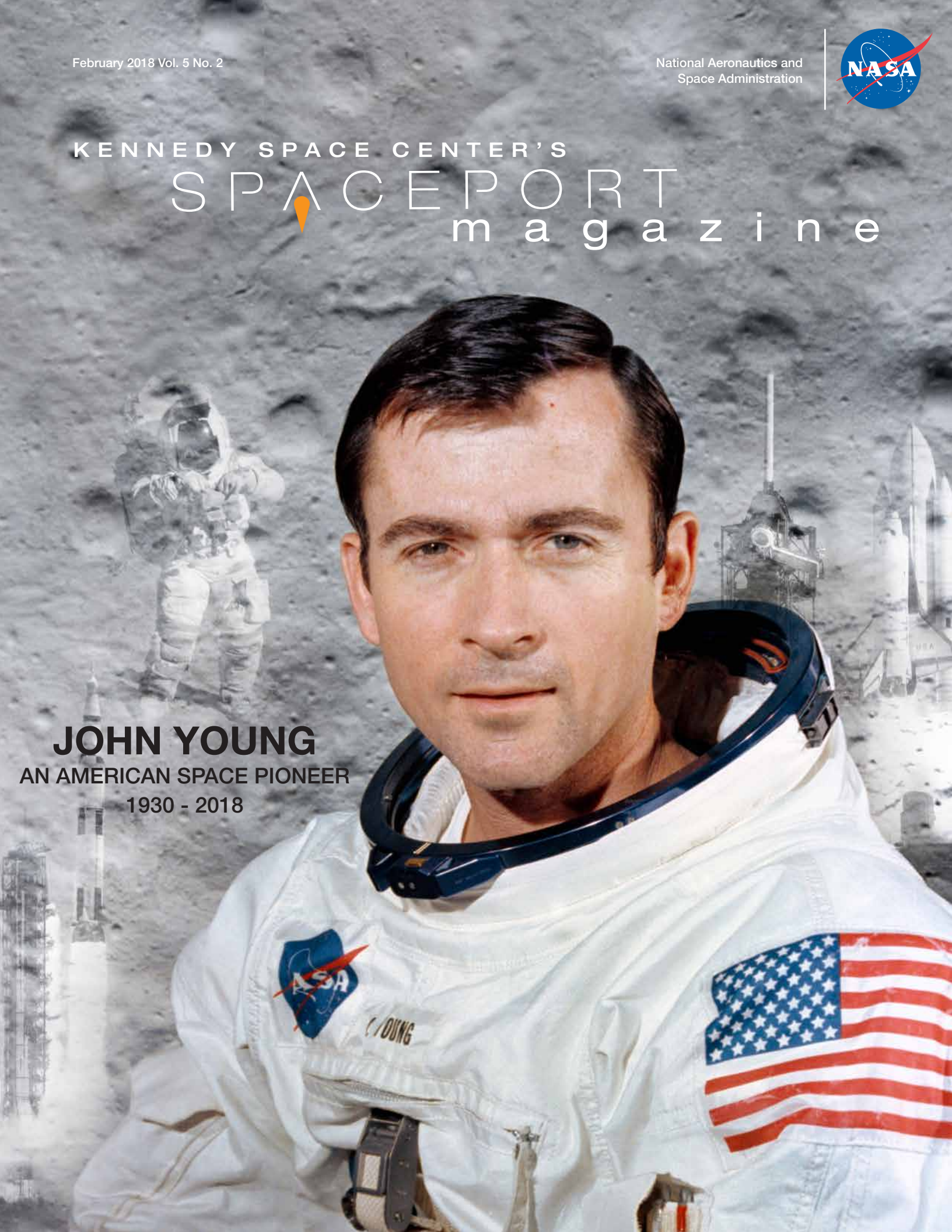
KENNEDY SPACE CENTER'S

SPACEPORT magazine



JOHN YOUNG

AN AMERICAN SPACE PIONEER

1930 - 2018

KENNEDY SPACE CENTER'S

SPACEPORT MAGAZINE

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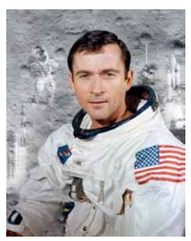

Cover: Montage image of astronaut John Young. In foreground, Young's portrait for the Apollo 10 mission. Background images, top left, Young on the surface of the Moon; below left, liftoff of the Apollo/Saturn V; top right, liftoff of the space shuttle. Photo credits: NASA

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I am KENNEDY SPACE CENTER

CHAS ABELL

Human Resources Business Partner
NASA-Kennedy Human Resources

I've been at Kennedy for nearly 29 years, the past seven in Human Resources.

My current role is Human Resources Business Partner (HRBP) supporting the Launch Services Program and Kennedy's Human Resources Directorate. The HRBP is a new concept for human capital that's being piloted this year at both Johnson Space Center and Kennedy. My work involves supporting organizations' understanding of their workforce, executing human capital strategies and planning the workforce of tomorrow. What's my piece of the NASA puzzle? I would say the little blue one.

Moving from communications engineer into Human Resources at the close of the Space Shuttle Program definitely is not a typical path. But I was looking for new challenges, and I wanted to learn more about the business of Kennedy and NASA. A detail opportunity led to a permanent move into HR that has delivered on both fronts.

From my engineering perspective, there really isn't any bigger challenge than understanding, modeling, predicting and optimizing people. The beauty is that the people we support do amazing things every day. We set our sights on the universe, and we only get there with great people.

As a young engineering co-op, I watched my first shuttle night launch from the roof of the Central Instrumentation Facility (CIF) and marveled at the technical awesomeness. It went from pitch black to "bright enough to read by" within seconds. I'm now looking forward to watching the first Space Launch System launch from where the CIF once stood and marveling at the human awesomeness.

IN MEMORIAM

John Young remembered as Gemini, Apollo, Space Shuttle astronaut

BY BOB GRANATH

Gemini, Apollo and space shuttle astronaut John Young in a portrait taken in 2002. Photo credit: NASA/Robert Markowitz

In memory of NASA astronaut **John Young**, Kennedy Space Center Director Bob Cabana placed a memorial wreath at the **Heroes and Legends exhibit** at the center's visitor complex. The brief ceremony took place on the afternoon of Jan. 11, 2018. Young died Jan. 5, 2018, at the age of 87 in Houston. He was the only astronaut to fly in NASA's Gemini, Apollo and Space Shuttle Programs.

"NASA and the world have lost a pioneer," acting NASA Administrator Robert Lightfoot said in a statement. "Astronaut John Young's storied career spanned three generations of spaceflight; we will stand on his shoulders as we look toward the next human frontier."

Cabana also praised Young for his constant focus on flight safety.

"He tried bringing attention to technical problems so they could be dealt with," Cabana said. "Safety was foremost in his mind. He knew we are in a very risky business, but he also knew the importance of paying attention to detail and always doing things right."

Young served as pilot on **Gemini III** with Mercury veteran Gus Grissom. Launched on March 23, 1965, it was the first flight in which the astronauts could change their spacecraft's orbit.

The following year, Young was command pilot on **Gemini 10** with Mike Collins during July 18-21, 1966. The mission became the first to rendezvous with two spacecraft -- an Agena target docking vehicle launched for their mission and the one orbited earlier that year for Gemini 8.

Between May 18-26, 1969, Young was command module pilot on **Apollo 10** with Tom Stafford as commander and Gene Cernan as lunar module pilot. The mission served as a "dress rehearsal" for the first lunar landing mission two months later.

Young was commander of **Apollo 16** during April 16-27, 1972. He walked on the moon with lunar module pilot Charlie Duke while Ken Mattingly orbited in the command module.

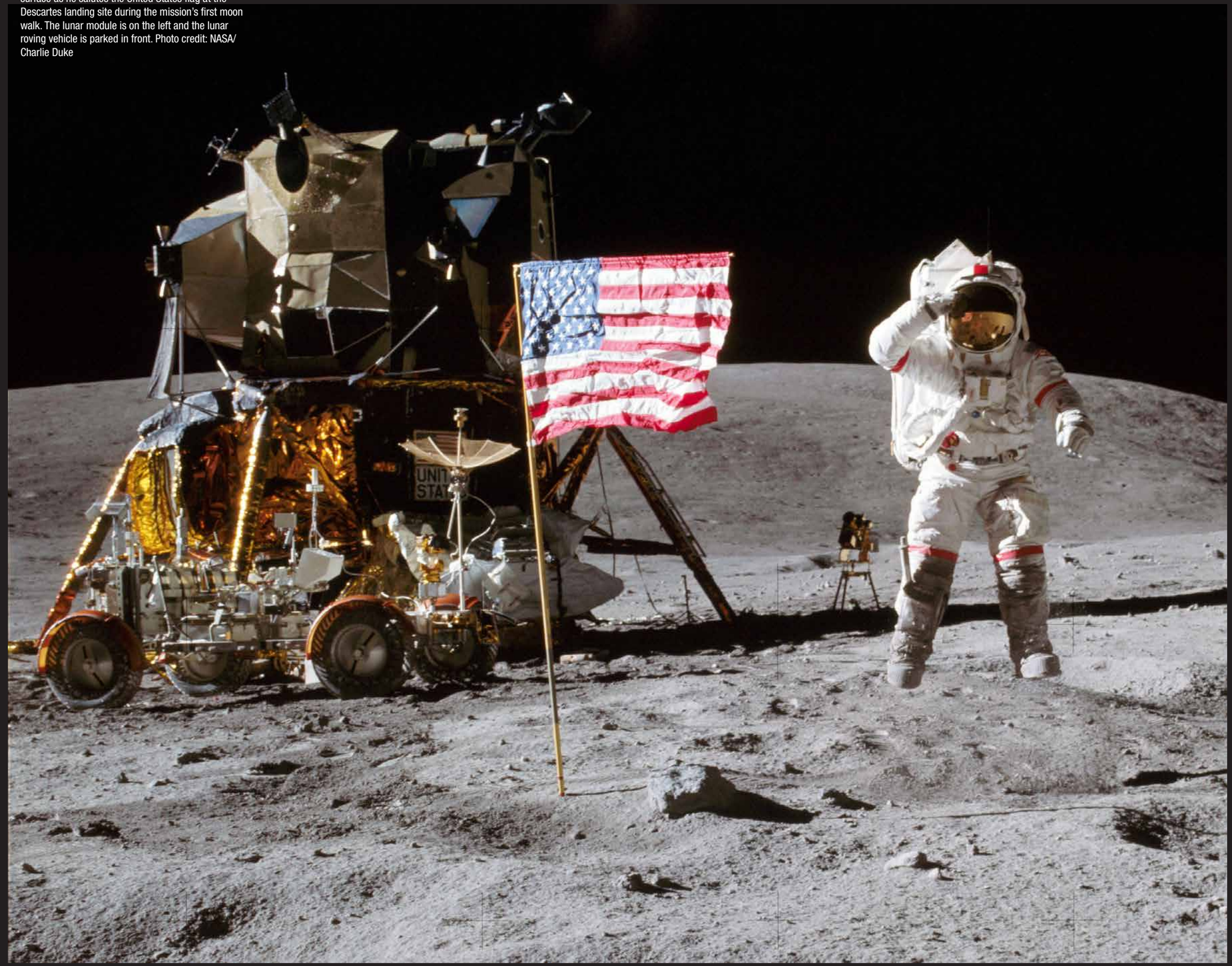
During the Apollo 16 moon walks, Mission Control in Houston radioed up that Congress had passed funding for the space shuttle.

Young was selected to command **STS-1**, the first flight of the Space Shuttle Program with pilot Bob Crippen. Liftoff occurred on April 12, 1981, launching a new era of spaceflight 20 years to the day after Russian cosmonaut Yuri Gagarin became the first human to travel in space.

When **STS-9** lifted off on Nov. 28, 1983, Young became the first person to fly in space a sixth time. This would be the first shuttle mission to carry the

Gemini X Command Pilot John Young arrives at Launch Pad 19 at Cape Kennedy (now Cape Canaveral) Air Force Station. Photo credit: NASA

Apollo 16 Commander John Young leaps from the lunar surface as he salutes the United States flag at the Descartes landing site during the mission's first moon walk. The lunar module is on the left and the lunar roving vehicle is parked in front. Photo credit: NASA/ Charlie Duke



NASA astronaut John Young was remembered in a ceremony at the Heroes and Legends exhibit at the Kennedy Space Center Visitor Complex. The brief memorial took place on the afternoon of Jan. 11, 2018. Photo credit: NASA/Frank Michaux

European Space Agency's Spacelab module in the cargo bay. The six-person crew included ESA astronaut Ulf Merbold of Germany.

Young was born in San Francisco, but his family moved to Georgia and later Orlando, Florida. He earned a degree in aeronautical engineering from Georgia Tech, graduating in 1952 with highest honors.

Following graduation, Young joined the U.S. Navy. After serving for a year aboard a destroyer, he then was assigned to flight training. He flew fighter planes for four years before completing test pilot training and served three years at the Navy's Air Test Center.

In September 1962, Young was selected as one of nine military pilots becoming NASA's second group of astronauts.

A year after Apollo 16, Young became chief of the Space Shuttle Branch of the Astronaut Office at NASA's Johnson Space Center in Houston. The following year, he retired from the Navy as a captain after 25 years of military service and was named chief of the Astronaut Office, a post he held until May 1987.

Among his many awards and honors, Young was inducted into the U.S. Astronaut Hall of Fame on March 19, 1993.

At the end of 2004, Young retired from NASA. But he continued to advocate the development of technologies that will allow explorers to live and work on the Moon and Mars.

"John was one of that group of early space pioneers whose bravery and commitment sparked our nation's first great achievements in space," Lightfoot said. "But, not content with that, his hands-on contributions continued long after the last of his six spaceflights."

PLANNING BIG

Kennedy Space Center Director Looks Ahead to 2018 Key Milestones

BY BOB GRANATH

Kennedy Space Center Director Bob Cabana speaks to employees at the Florida spaceport about plans for the coming year. Photo credit: NASA/Frank Michaux

Kennedy Space Center Director Bob Cabana speaks to employees at the Florida spaceport about plans for the coming year. Photo credit: NASA/Frank Michaux

Kennedy Space Center Director Bob Cabana recently spoke to spaceport employees about plans for 2018. The coming year will be highlighted by NASA's **Commercial Crew Program** (CCP) partners preparing to launch test flights for crewed missions to the **International Space Station**.

"This is going to be an awesome year for us," Cabana said, speaking to center employees on Jan. 11 in the Lunar Theater of the Kennedy Space Center Visitor Complex's Apollo Saturn V Center. "The number one priority this year is we've got to get commercial crew flying to the International Space Station."

Through the CCP, based primarily at Kennedy, partners SpaceX and Boeing are developing safe, reliable and cost-effective access to and from low-Earth orbit with American-built spacecraft systems. Boeing's CST-100 Starliner and SpaceX's Crew Dragon are the next generation of American spacecraft to carry astronauts to the space station.

Lisa Colloredo, deputy program manager for the Commercial Crew Program, noted that two uncrewed demonstration flight tests, known as Demonstration Mission 1 for SpaceX and Orbital Flight Test for Boeing, are scheduled for later this year. After the uncrewed flight tests to the station, both companies will launch a mission with astronauts aboard prior to being certified by NASA for crew rotation missions.

"This is going to be a big year for the Commercial Crew Program," Colloredo said.

According to Josie Burnett, director of Exploration Research and Technology Programs, crews aboard the space station also will continue to receive supplies launched by SpaceX **commercial resupply services** missions lifting off from the Florida spaceport.

"The space station continues to be a high priority for our organization," she said. "We are flying numerous commercial cargo flights to the station this year."

While partnering with industry to support transportation to the space station and meet other needs, NASA continues to focus on development of its **Orion** spacecraft and **Space Launch System** (SLS) rocket that one day will send astronauts beyond low-Earth orbit.

Darrell Foster, chief of Project Management in **Exploration Ground Systems**, explained that his organization will spend 2018 completing construction of facilities to support SLS and Orion and be ready to accept flight hardware.

The SLS is a new heavy-lift rocket that will be capable of sending humans aboard Orion to destinations such as the Moon and Mars. The first integrated flight of the SLS and Orion is known as Exploration Mission-1, and will demonstrate the nation's commitment and capability to extend human presence to the Moon and beyond.

"We are now working full bore toward the Exploration Mission-1 launch in December of 2019," Foster said.

The coming year also will be a busy time for the Launch Services Program (LSP) at Kennedy. Mic Woltman, chief of the Fleet Systems Integration Branch of LSP, spoke about his organization's plans.

"This will be an exciting year for us," he said. "We have six launches, with six launch vehicle configurations at six launch sites this year."

Those missions are:

NOAA's Geostationary Operational Environmental Satellite-S, or GOES-S

NASA's Transiting Exoplanet Survey Satellite, or TESS

NASA's Interior Exploration using Seismic Investigations, Geodesy and Heat Transport, or InSight

NASA's Parker Solar Probe

NASA's Ice, Cloud and land Elevation Satellite-2, or ICESat-2

NASA's Ionospheric Connection Explorer, or ICON

"I'm really excited about our future," Cabana said. "If we take care of our employees, our organizations, focus on our customers and bring innovation into the forefront through our leadership efforts, there is no doubt we will be successful."

2018: A Big Year for NASA's Launch Services Program

BY LINDA HERRIDGE

If there's a magic number for NASA's **Launch Services Program** (LSP) at the agency's Kennedy Space Center, it could be six. That's because there are six primary NASA missions scheduled to launch from two different coasts, within about six months, atop six different rocket configurations (five different rockets).

"Not since 2003 has the Launch Services Program had a denser and more diverse manifest as it will this year," said Chuck Dovale, the program's deputy manager. "We are poised and ready for the challenges ahead."

"It's going to be an exceptional year, with a variety of launches," said Tim Dunn, LSP launch director.

Kicking off the year will be the launch of NOAA's Geostationary Operational Environmental Satellite-S, or **GOES-S**. The satellite is scheduled to launch on March 1, atop a United Launch Alliance (ULA) Atlas V rocket from Space Launch Complex 41 at Cape Canaveral Air Force Station (CCAFS), on the east coast.

The GOES-S weather satellite will launch into a geostationary orbit around the Earth and join its predecessor GOES-R, which was launched just over a year ago. The satellite will help give the big weather picture, including precise data on hurricanes.

Following closely behind will be the Transiting Exoplanet Survey Satellite, or **TESS**, which will launch March 20 atop a SpaceX Falcon 9 rocket from Space Launch Complex 40 at CCAFS.

TESS will search for planets outside our solar system, including those that could support life.

The Interior Exploration using Seismic Investigations, Geodesy and Heat Transport, or **InSight**, is the first of two interplanetary missions, and the first one ever launching from the west coast. The probe will launch on its mission to Mars on May 5 atop a ULA Atlas V rocket from Space Launch Complex-3E at Vandenberg Air Force Base in California.

InSight is a NASA Discovery Program mission. The single lander will descend to the surface of Mars and use its seismic sensors to study the interior of the Red Planet.

The second interplanetary mission is the **Parker Solar Probe**. The spacecraft, about the size of a small car, will launch July 31 atop a ULA Delta IV Heavy rocket from Space Launch Complex 37 at CCAFS. The probe will travel to about 4 million miles from the Sun's surface and study the giant fireball's corona.

"The Parker Solar Probe is truly our 'shiny object' mission," said Omar Baez, LSP launch director for this mission. "It is the first time we will fly a Delta IV Heavy with a science payload. We need to meet the very short 20-day planetary opportunity."

Dunn said that interplanetary missions are more difficult. Those missions, by their very nature and how the trajectories work, have very precise windows when they can launch. For example, to get to Mars this year, the program has only about a 4.5-week period between early May and the first week of June to launch, or the program would have to stand down for about 26 months.

On Sept. 12, the Ice, Cloud, and land Elevation Satellite-2, or **ICESat-2**, will launch atop the final United Launch Alliance Delta II rocket from Space Launch Complex-2W at Vandenberg.

"As a 'parent' of many rockets, we're not supposed to have favorites," Dunn said, "but the final launch of a Delta II rocket will hold a special place in my heart. I worked on the Delta II team back in the 1990s at Cape Canaveral Air Force Station. It was there that I really learned the inner workings of what it takes to launch that particular rocket."

ICESat-2 will carry a single instrument, the Advanced Topographic Laser Altimeter System, or ATLAS. It will gauge the slope of Earth's surface and gather data to estimate the annual height change of Greenland and Antarctica ice sheets to within 4 millimeters – the width of a pencil.

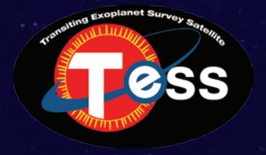
The Ionospheric Connection Explorer, or **ICON**, will launch aboard an Orbital ATK Pegasus XL rocket later this year. Pegasus is the only airborne-launched rocket. It will be attached beneath the company's L-1011 Stargazer aircraft, carried to 39,000 feet, and then released for launch.

ICON will study the frontier of space – the dynamic zone high in the atmosphere where Earth's weather from below meets space weather above.

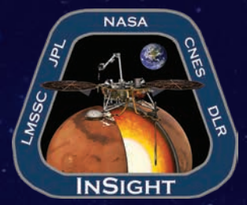
"These missions truly highlight the wide-ranging portfolio that NASA science has to offer and LSP is proud of their role in making 2018 historic," Dovale said.

"It's an incredible position to be in when you're part of a team that is bringing that capability to our nation, whether it's Earth science, weather or interplanetary missions," Dunn said.

GOES-S



TESS



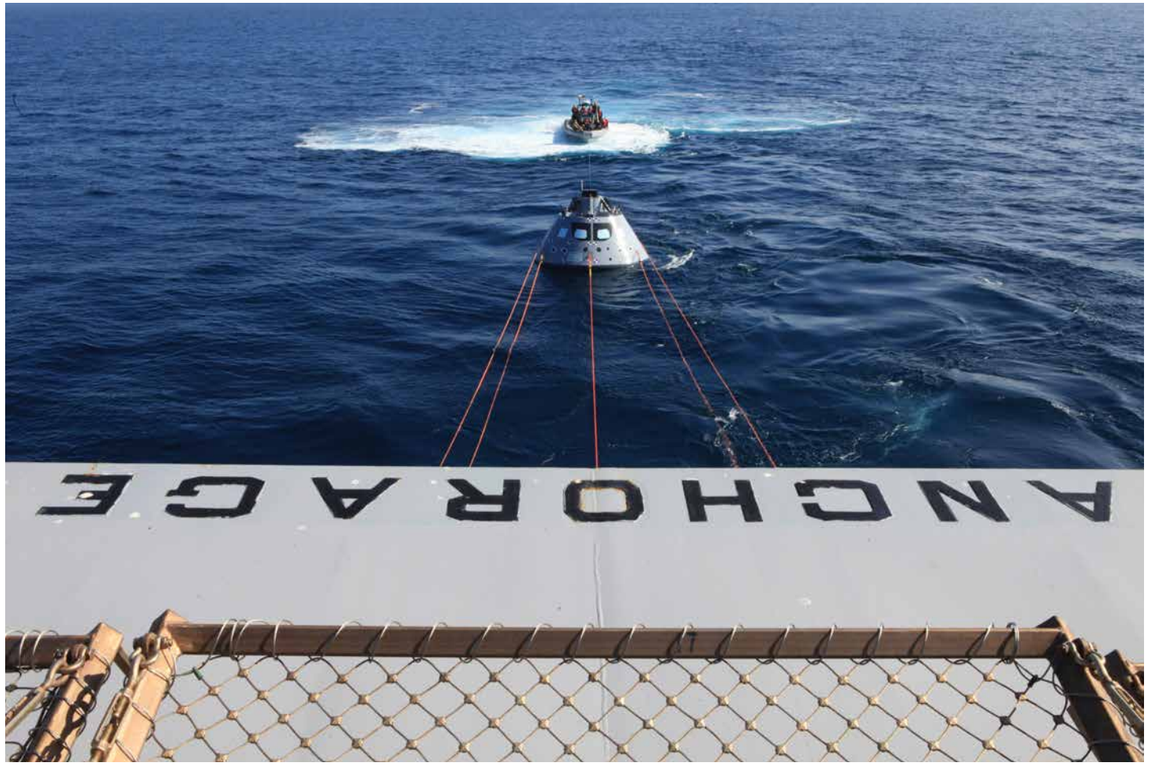
InSight

PSP

ICESat-2

ICON

NASA's Commercial Crew Program astronauts, wearing spacesuits and augmented reality headsets, rehearse returning to Earth from the International Space Station during recent testing at Boeing's Extended Reality Laboratory in Philadelphia. The astronauts are seated upside down so they can practice releasing their seat harness and moving to the side hatch of the Starliner without assistance. The astronauts wearing the mixed reality gear see a digital version of the interior of the Starliner as it would look in the real-life scenario while interacting with the environment around them. Both Boeing and SpaceX have been working with the astronauts training to fly the test missions to the International Space Station. Photo credit: Boeing



Off the rear of the USS Anchorage, the Orion test article is pulled in by a winch line at the rear of the USS Anchorage's well deck that brings the capsule into the ship, along with four manned Line Load Attenuation Mechanism Assemblies that control the capsule's side-to-side movement, as well as a tending line attached to a rigid hull inflatable boat for controlling Orion's movement behind the ship. Photo credit: NASA/Bill White

ORION SPACECRAFT RECOVERY REHEARSAL

NASA's new deep space exploration systems will send crew 40,000 miles beyond the Moon, and return them safely home. After traveling through space at 25,000 miles per hour, the Orion spacecraft will slow to 300 mph after it passes through the Earth's atmosphere. The spacecraft then slows down to 20 mph before it safely splashes down in the Pacific Ocean.

When astronauts come back from deep space, they will need to be picked up as quickly as possible. That's where Kennedy Space Center's NASA Recovery Team comes in.

Under the auspices of **Exploration Ground Systems**, Melissa Jones, NASA's recovery director, and her team will recover the Orion capsule and crew. NASA and the U.S. Navy are working together to ensure they are ready before the first uncrewed Orion mission aboard the agency's new Space Launch System rocket, known as **Exploration Mission-1.**

The integrated NASA and U.S. Navy team were aboard the USS Anchorage Jan. 17 through 24, testing out new ground support equipment and practicing their procedures.

After Orion completes its mission out past the Moon and heads to Earth, Jones will get the call Orion is coming home. Then, it is her job to get the joint NASA and U.S. Navy team to the capsule's location quickly and bring it and the astronauts safely aboard the U.S. Navy recovery ship.

"We are testing all of our equipment in the actual environment we will be in when recovering Orion after Exploration Mission-1," Jones said during the test. "Everything we are doing today is ensuring a safe and swift recovery when the time comes for missions with crew."

As part of Underway Recovery Test 6, the Orion test article is pulled in by a winch line at the rear of the USS Anchorage's well deck that brings the capsule into the ship, along with four manned LLAMAs (Line Load Attenuation Mechanism Assembly) that control the capsule's side-to-side movement and a tending line attached to a rigid hull inflatable boat for controlling Orion's movement behind the ship. The testing with Kennedy Space Center's NASA Recovery Team and the U.S. Navy will provide important data that is being used to improve recovery procedures and hardware ahead of Orion's next flight, Exploration Mission-1, when it splashes down in the Pacific Ocean. Photo credit: NASA/Bill White

SYSTEM CHECK

Water deluge test a success at Launch Pad 39B

BY LINDA HERRIDGE

When NASA's new **Space Launch System** (SLS) rocket lifts off, its four RS-25 engines and two solid rocket boosters will produce a combined 8.4 million pounds of thrust, and with that comes a torrent of heat and noise. To help protect the SLS rocket, **Orion** spacecraft, mobile launcher and launch pad from the extreme acoustic and temperature environment, water will spray onto the launch pad during ignition and liftoff.

During a water deluge test in December, thousands of gallons of water flowed into the flame trench and through upgraded systems at NASA Kennedy Space Center's **Launch Pad 39B**. Upgrades included corrosion control, refurbishment of the elevated water storage tank, and replacement of much of the piping, valves, nozzles, and other components.

The test was a milestone for **Exploration Ground Systems** to confirm and baseline the performance of the pad's Ignition Overpressure and Sound Suppression (IOP/SS) systems, including new portions of the system that were upgraded after the Space Shuttle Program. The IOP/SS systems reduce the effects of acoustic energy and main engine ignition at liftoff, and reduces sound pressure levels experienced by the vehicle during ascent.

"Test of the upgraded and new portions of the system and a new controls system went very smoothly," said Regina Spellman, pad senior project manager.

The test included a preliminary phase to flow about 150,000 gallons of water at high speed from a holding tank through all of the new and modified piping and valves at the flame trench, through the nozzles at the top of the flame deflector and mobile launcher interface pipes at the pad. On the second day, approximately 450,000 gallons of water flowed through the systems.

At peak flow, the water reached about 100 feet in the air above the pad surface – giving Old Faithful a run for its money.

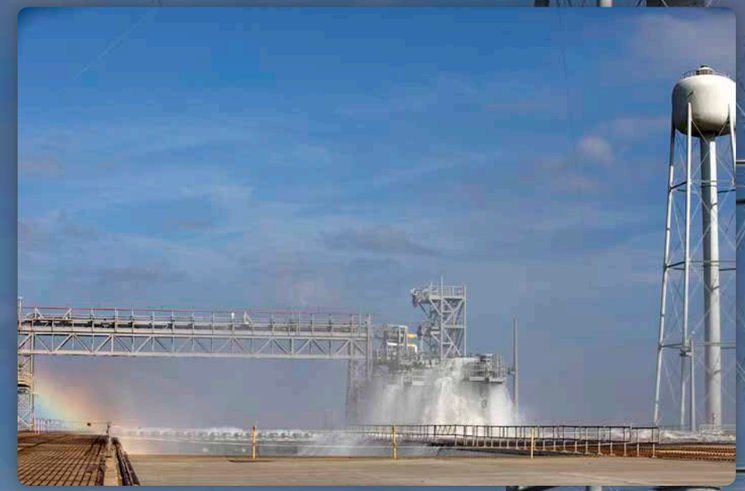
"A geyser occurred because the mobile launcher was not present at the pad," said Nick Moss, pad deputy project manager. "When the mobile launcher is sitting on its pad surface mount mechanisms, the rest of the IOP/SS system is connected to the pad supply headers and the water will flow through supply piping and exit through the nozzles."

As the water subsided, it flowed into the flame trench and onto the east pad surface before finding its way to the east and west holding ponds through channels, called water flumes, or off the pad surface through the water drains and trenches. During an actual launch, some of the water will evaporate due to the heat.

"Additional water flow tests are scheduled to occur when the mobile launcher returns to the pad for integrated testing this summer," Moss said.

NASA is hard at work building the Orion spacecraft, SLS rocket and the ground systems needed for a sustainable approach to challenging missions into the solar system. Orion's first flight atop the SLS, **Exploration Mission-1**, will pave the way for future missions with astronauts and enable missions to the Moon, Mars and beyond.

About 450,000 gallons of water flowed at high speed from a holding tank through new and modified piping and valves, the flame trench and mobile launcher interface risers during a wet flow test at Launch Pad 39B at NASA's Kennedy Space Center. Photo credit: NASA/Kim Shiflett



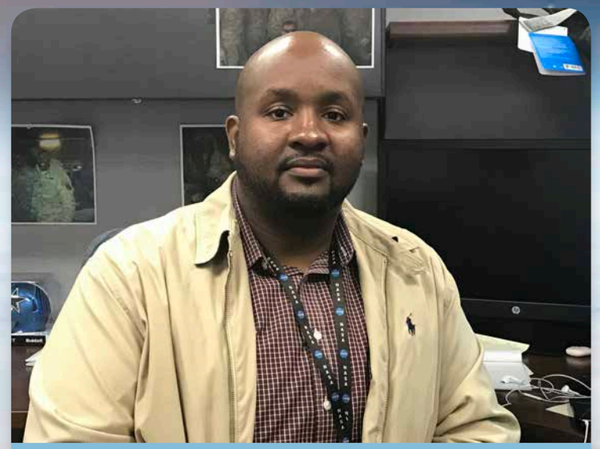
Water flowed at high speed from a holding tank through piping and valves, the flame trench and mobile launcher interface risers during a wet flow test at Launch Pad 39B at NASA's Kennedy Space Center. Photo credit: NASA/Kim Shiflett

EGS employees share their thoughts about Exploration Ground Systems

The Ground Systems Development and Operations Program at Kennedy Space Center recently was renamed Exploration Ground Systems (EGS). To celebrate Valentine's Day, some members of EGS were asked to share their personal thoughts on why they love working for the program.

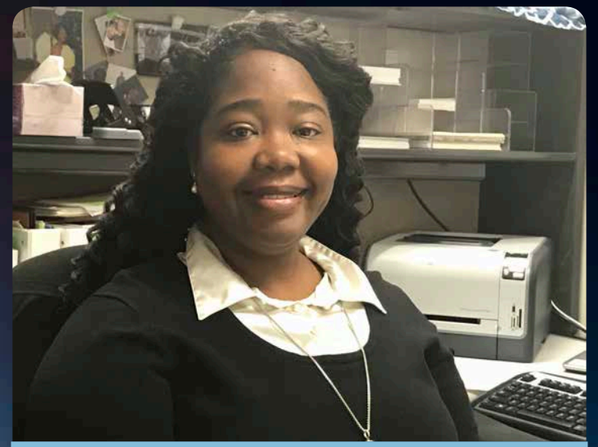
"I love the program because they care about advancing exploration in space. They also appreciate the people who work for them. I am very proud to be a part of this team."

Lisa Seiler
Orion Interface Lead



"I love the program because it's an opportunity to be on the edge of the future. It's exciting to see this program accomplish greatness."

Joe Turner
Program Analyst



"I love the program because of the people in upper management. When leadership gives you a task, they teach you and empower you to accomplish it."

Ann Howard-Revel
Program Analyst

"I love the program because basically we are doing something that has never been done before. We are paving the way for future generations and exploring new technologies. This is something to be extremely proud of."

Philip Harrelson
Program Analyst

Space Flight Awareness

SFA message: everyone plays role in flight safety, mission success

BY BOB GRANATH

With the beginning of **Project Mercury**, NASA initiated efforts to stress the new program was more than hardware. Rockets and spacecraft had been launching from Cape Canaveral for the better part of a decade. The new flight safety emphasis focused on the fact that the missions now included people.

The program was formalized in 1963 and called Manned Flight Awareness, or MFA. As **space shuttle** missions flew and the **International Space Station** Program was beginning in the mid-1990s, the name was updated to what it is today -- **Space Flight Awareness**, or SFA.

The purpose was simple, but crucial. Emphasize that everyone involved in human spaceflight, both government and industry, at NASA centers and suppliers, all play a role in flight safety and mission success.

SFA always has included posters, commemorative photographs, mission emblems and astronauts visiting agency centers and contractors.

Early in the Mercury Program, members of the "Original Seven" astronaut corps made regular appearances. During a visit with employees of General Dynamics, the Atlas rocket prime contractor, Gus Grissom stepped to a microphone and stated their message in a simple manner.

"Do good work," he said.

For years, that was the succinct message for MFA.

According to the NASA History Office's book, "**Stages to Saturn**" by Roger Bilstein, the Marshall Space Flight Center's Apollo Saturn V Program Office worked with MFA to develop a way to remind employees about the importance of their giving flight hardware special care.

"Marshall's Manned Flight Awareness personnel and the contractors participated in a program to make sure vendors and subcontractors shipped critical space hardware in special containers and boxes," Bilstein wrote. "These boxes were marked with stickers and placards imprinted with reminders to handle with particular care, because the hardware was important to the astronauts whose lives depended on the integrity of the hardware."

The effort included a series of posters advertising the special labels.

In early 1967, Al Chop, director of Public Affairs at NASA's Manned Spacecraft Center (now Johnson Space Center), began looking for a mascot for MFA similar to the United States Forest Service's Smokey the Bear.

Considering the "experience" of Snoopy as an imagined World War I aviator, Chop approached United Features Syndicate, distributor of the Peanuts comic strip. After being initially turned down by the syndicate, he took his proposal directly to Peanuts creator, Charles Schulz.

The cartoonist agreed to allow NASA to use "Snoopy the Astronaut" at no cost. Schulz drew the image the Silver Snoopy award pin is based on, and he created art for posters promoting the program.

The collaboration between Schulz and NASA was a natural. When **Apollo 10** flew to the Moon in May 1969, the goal was to use the lunar module (LM) to "snoop around" the next mission's landing site from about 50,000 feet. The crew of Tom Stafford, John Young and Gene Cernan decided to name the LM, "Snoopy" and the command module "Charlie Brown."

The SFA Program continue to grow during the **Skylab**, **Apollo-Soyuz**, space shuttle and International Space Station eras. In addition to astronaut visits and promotions items, the SFA Program uses a variety of awards as part of its recognition activities.

Space Flight Awareness Awards and Recognition

SFA Honoree Award is one of the highest presented to NASA and industry and is for first-level management and below. This award is presented to employees for their dedication to quality work and flight safety. Awardees are presented with a certificate, pin and invitation to a special SFA Honoree event.

SFA Silver Snoopy Award, also known as the Astronauts Personal Achievement Award, symbolizes the intent and spirit of Space Flight Awareness. An astronaut presents the award as it is their way of honoring outstanding performance, contributions to flight safety and mission success. Less than one percent of the space program's workforce receives the recognition annually. Awardees are presented with a certificate and a sterling silver Snoopy pin that was flown on a space shuttle mission.

SFA Team Award recognizes small groups that have demonstrated exemplary teamwork while accomplishing a particular task or goal in support of the human spaceflight program. Awardees are presented with a certificate and a pin.

SFA Management Award acknowledges proactive mid-level managers who consistently demonstrate loyalty, empowerment, accountability, diversity, excellence, respect, sharing, honesty and integrity. Awardees receive a trophy.

SFA Flight Safety Award honors significant, outstanding individual or team contributions related to the prevention of anything that could lead to a catastrophic mishap to the vehicle, crew or mission. Awardees receive a trophy.

SFA Supplier Award recognizes significant, outstanding individual or team contributions related to the prevention of anything that could lead to a catastrophic mishap to the vehicle, crew or mission. Awardees receive a trophy.

SFA Trailblazer Award honors employees who are in the early stages of their career. Awardees demonstrate strong work ethic and creative, innovative thinking in support of human spaceflight. Awardees receive a trophy.

SFA Special Local Award is used to recognize local employees for their dedication to quality work, flight safety and mission success. Awardees receive an award trophy.

Silver Snoopys Presented for Outstanding Achievements

On Jan. 18, 2018, an awards ceremony took place in the Debus Conference Center of the Kennedy Space Center Visitor Complex honoring the achievements of employees at the Florida spaceport.

SFA Silver Snoopys, the astronauts Personal Achievement Awards, were presented by NASA astronaut Chris Cassidy. He was a member of the STS-127 space shuttle crew and later flew to the space station about Soyuz TMA-08M as part of Expedition 35 and 36.

Assisting Cassidy for one of the awards was former astronaut James "JR" Reilly, who flew on shuttle missions STS-89, STS-104 and STS-117. Reilly attended to help honor his son, Trey Reilly.

The Snoopy awards were presented to 16 individuals for "professionalism dedication and outstanding support that greatly enhances flight safety and mission success."

Designed by Peanuts creator Charles Schulz, the sterling Silver Snoopy pin is awarded to those selected for the Astronauts Personal Achievement Award. It is presented for "professionalism dedication and outstanding support that greatly enhances flight safety and mission success." Photo credit: NASA

From NASA:

Keith Connell, Center Planning and Development
Tiffany Fairley, Communications and Public Engagement
Timothy "Ozzie" Fish, Engineering
Julia Hallum, Human Resources
Angel Lucena, Engineering
Kathy Meesakul, Engineering
Darcy Miller, Safety and Mission Assurance
Robyn Mitchell, Spaceport Integration
Bao Nguyen, Center Planning and Development
Tushar Patel, Engineering
James Trey Reilly, Exploration Ground Systems
John Speck, Engineering

Representing the Test and Operations Support Contract:
Albert "Al" Barretta, Jacobs
Mel Green, Jacobs
Jeffrey Moore, Jacobs
Eric Skahn, Jacobs

SPACE AGE BEGINS

America's first satellite established 'foothold in space'

By Bob Granath

On the evening of Jan. 31, 1958, the United States orbited its first satellite -- Explorer 1. The effort was part of the nation's participation in the International Geophysical Year (IGY), a peaceful scientific endeavor. It also marked America's first step in the Space Race of the Cold War.

The United States' first satellite, Explorer 1, is launched into orbit by a Jupiter C rocket on Jan. 31, 1958. Explorer 1 confirmed existence of high-radiation bands above the Earth's atmosphere. Image credit: NASA

Dr. Wernher von Braun led the Army Ballistic Missile Agency (ABMA) team at Redstone Arsenal in Huntsville, Alabama, that designed the rocket that launched Explorer 1. After the satellite was confirmed to be in orbit, he characterized the event as a crucial beginning for the nation's space program.

"We have firmly established our foothold in space," von Braun said. "We will never give it up."

Plans to orbit a satellite were part of IGY, a scientific collaboration of 67 nations taking place from July 1, 1957, to Dec. 31, 1958. Both the U.S. and Soviet Union announced that their participation would include launching satellites to orbit the Earth.

Even with the advance declaration, many Americans were stunned when the Soviets launched the world's first satellite, Sputnik, on Oct. 4, 1957. A month later, Sputnik 2 orbited with a dog as a passenger.

Plans to launch an American satellite began in 1954 and despite strong advocacy from the ABMA, the Eisenhower Administration chose the U.S. Navy's Vanguard project to lead the nation's efforts for the IGY. However, the first attempt to orbit a Vanguard satellite ended in a launch pad explosion on Dec. 6, 1957.

In the gantry at Space Launch Complex 26 at the Cape Canaveral Missile Annex (now Cape Canaveral Air Force Station), a technician lowers the Explorer 1 satellite onto the launch vehicle's fourth stage motor. Photo credit: NASA

The job of launching America's first satellite then was given to ABMA, which had been waiting for just such an opportunity. Taking on the task of designing and building the Explorer 1 satellite was the Jet Propulsion Laboratory (JPL) of the California Institute of Technology in Pasadena, California, directed by Dr. William Pickering.

The Explorer 1 effort included the work of the satellite's principal investigator, Dr. James Van Allen, professor of physics and astronomy at the University of Iowa. He had been studying

Technicians and engineers monitor the countdown for the liftoff of Explorer 1 in the control room of the blockhouse at Space Launch Complex 26 at the Cape Canaveral Missile Annex (now Cape Canaveral Air Force Station). Photo credit: NASA

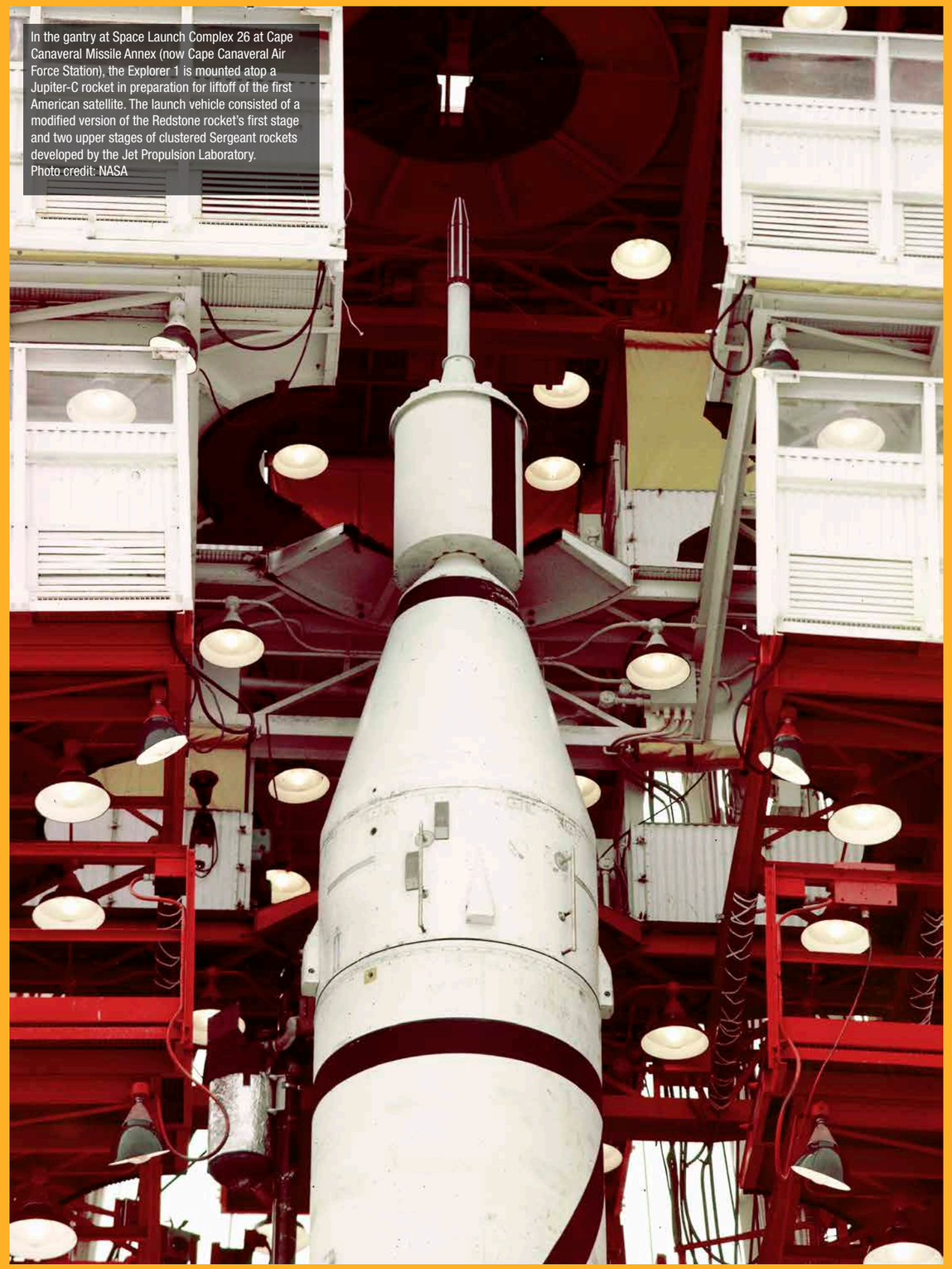
cosmic rays around the Earth. Van Allen developed instrumentation to measure the concentration of ions and electrons in space and to detect cosmic rays. By Jan. 11, 1958, the work of assembling and testing the 30.8-pound, 6-foot, 9-inch Explorer 1 satellite was complete.

The Jupiter C's first stage was positioned at Launch Complex 26 at the Cape Canaveral Missile Annex (now Cape Canaveral Air Force Station), on Jan. 16. The rocket's upper stages arrived at the pad on Jan. 24, and were attached to the top the rocket.

On the evening of Jan. 31, a group of 57 engineers, technicians and managers monitored the countdown from the pad 26 blockhouse. Pickering, von Braun and Van Allen waited at the Pentagon. Plans called for the trio to travel to the National Academy of Sciences, where they would announce either success or failure.

At 10:48 p.m. EST, the rocket roared to life and blazed a trail into the night sky. Soon it was out of sight and contact was lost as there was not yet a far-flung network of tracking stations.

Pickering stayed on the telephone with his team at JPL waiting



In the gantry at Space Launch Complex 26 at Cape Canaveral Missile Annex (now Cape Canaveral Air Force Station), the Explorer 1 is mounted atop a Jupiter-C rocket in preparation for liftoff of the first American satellite. The launch vehicle consisted of a modified version of the Redstone rocket's first stage and two upper stages of clustered Sergeant rockets developed by the Jet Propulsion Laboratory. Photo credit: NASA

for confirmation that Explorer 1 was successfully in orbit. If so, it would pass over a California tracking station no later than 12:30 a.m. EST early on Feb. 1.

That time passed with no signal.

But at 12:45 p.m. came the report, "California has the bird."

At the news conference, Pickering, von Braun and Van Allen reported that America's first satellite was in an elliptical orbit slightly higher than planned, accounting for the 15-minute delay in receiving a signal from Explorer 1. The spacecraft was circling the Earth every 114 minutes, 1,594 miles high, with a low point of 225 miles.

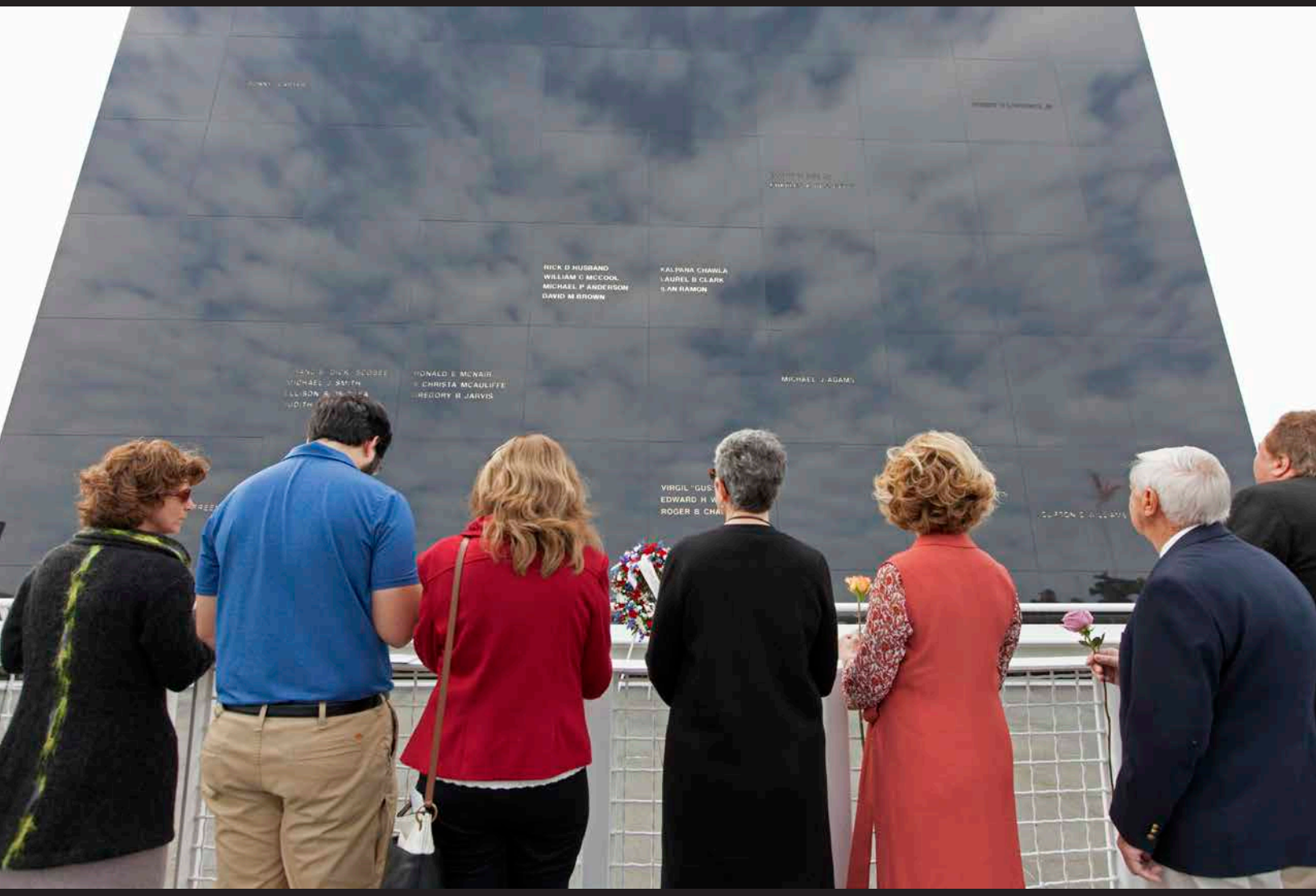
During operation, the satellite's cosmic ray detector discovered radiation belts around Earth which were named for Van Allen.

In the 60 years since liftoff of Explorer 1, the eyes of the world often focus on the Cape as additional spacecraft are launched to Earth orbit, the Moon and planets. In 1961, Alan Shepard became the first American in space, lifting off only a few hundred yards from where the nation's first satellite began its mission.

With construction of the Kennedy Space Center on adjacent Merritt Island, astronauts traveled to the lunar surface. For 30 years, space shuttles took crews to Earth orbit, culminating in construction of the International Space Station.

Today, Kennedy is a premier, multi-user spaceport where NASA and its partners continue to launch spacecraft, and soon will send crews on missions well beyond low-Earth orbit.

Following a post-launch news conference at the National Academy of Sciences in Washington, D.C., participants hoist a full-scale mock-up of the Explorer 1 satellite. From the left are Dr. William Pickering, director of the Jet Propulsion Laboratory of the California Institute of Technology in Pasadena, California; the satellite's principal investigator, Dr. James Van Allen, professor of physics and astronomy at the University of Iowa; and Dr. Wernher von Braun, chief of Guided Missile Development Operations at the Army Ballistic Missile Agency at Redstone Arsenal in Huntsville, Alabama. Image credit: NASA/Jet Propulsion Laboratory-Caltech



During the 2018 Day of Remembrance, family members and friends of NASA's fallen astronauts gather at the Astronauts Memorial Foundation Space Mirror Memorial at Kennedy Space Center Visitor Complex. Photo credit: NASA/Kim Shiflett

National Aeronautics and Space Administration

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